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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/672,926	09/26/2003	XiangFeng Dai	CRICP-001A	9489

7590 04/26/2005

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EXAMINER

SPITZER, ROBERT H

ART UNIT	PAPER NUMBER
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1724

DATE MAILED: 04/26/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

# Office Action Summary

Application No.

10/672,926

Applicant(s)

DAI, XIANGFENG

Examiner

Robert H. Spitzer

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

## Status

- 1) ☐ Responsive to communication(s) filed on \_\_\_\_.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

## Disposition of Claims

- 4) ☒ Claim(s) 1-53 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 35-38 is/are allowed.
- 6) ☒ Claim(s) 1,3-5,7-18,20-22,24-34 and 39-45 is/are rejected.
- 7) ☒ Claim(s) 2,6,19,23 and 46-53 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_ are subject to restriction and/or election requirement.

## Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 26 September 2003 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

## Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

## Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_.
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date \_\_\_\_.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_.

### DETAILED ACTION

1. Claims 35-38 are allowed.
2. The drawing figures are objected to because in Figs. 2 and 2A, there is no number "114" thereon.

3. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

4. Claims 4,5,7-12,21,22,24-29 and 40 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. Claims 4 and 5 are indefinite because the recited vane angles are not supported by the as-filed specification. Claims 7-9 are indefinite because they recite "at least two adsorbent flow channels" without any correlation to the "more than one adsorbent flow channel" previously recited in claim 6. Claims 10 and 11 are indefinite because the flow channel angle is not supported in the as-filed specification. Claim 12 is indefinite because it recites "each adsorbent flow channel" without any correlation to the "more than one adsorbent flow channel" previously recited in claim 6. Claims 21 and 22 are indefinite for the same reasons as claims 4 and 5, respectively. Claims 24-29 are indefinite for the same reasons as claims 7-12, respectively. Claim 40 is indefinite because it recites "at least one adsorbent flow channel" without any correlation to the "at least one adsorbent flow channel" already recited in claim 39.
5. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

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A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

6. Claims 1,3-5,13-18,20-22,30-34 and 39-45 are rejected under 35 U.S.C. 102(e) as being clearly anticipated by the disclosed moving bed adsorber of Squires (6,783,572).

7. Claims 2,6,19,23 and 46-53 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

8. The remaining references listed on the PTO-892 show art of interest.

9. Applicant's response to this Office action should also include the following editorial changes: page 5, line 9, "adorbent" should be "adsorbent"; page 6, line 14, "he" should be "the"; page 7, line 15, "crossectional" should be "cross-sectional"; page 8, line 15, "though" should be "through"; page 8, line 21, "as" should be "has"; page 9, line 9, "fig." should be "Fig."; page 10, line 1, "an" should be "a"; page 10, line 10, "a" should be deleted; page 11, line 10, "24" should be "20"; page 11, line 11, "provides" should be "provide"; page 11, line 27, "adsorption/desaborption" should be "adsorption/desorption"; page 16, line 31, "it" should be "It"; page 18, line 2, "502" should be "503", to correspond to page 17, line 20; page 19, line 16, "24alt" should be "22alt"; page 19, line 17, "containg" should be "containing"; page 19, line 19, the second occurrence of "30alt" should be "34alt"; page 20, line 1, "though" should be "through";

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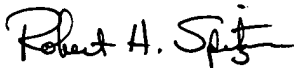
page 20, line 16, "for example at" should be deleted; page 20, line 30, "in the" should be inserted after "skilled"; claim 39, line 14, "trough" should be "through"; claim 40, line 9, "trough" should be "through"; and, in claim 51, line 1, "vaccuum" should be "vacuum".

10. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Robert H. Spitzer whose telephone number is (571) 272-1167. The examiner can normally be reached on Monday-Thursday from (5:30AM-4:00PM).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Duane Smith can be reached on (571) 272-1166. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

April 12, 2005

  
Robert H. Spitzer  
Primary Examiner  
Art Unit 1724  
April 12, 2005